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12.	Primary Examiner	Jaworski; Francis
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32.1.1	U.S. Patent Number	<u>4,611,599</u>
32.2.1	U.S. Patent Date	<u>09/00/1986</u>
32.3.1	U.S. Patentee Name	Bantall et al.
32.4.1	U.S. Patent Class	128
32.5.1	U.S. Patent Subclass	422
32.1.2	U.S. Patent Number	<u>3,817,254</u>
32.2.2	U.S. Patent Date	<u>06/00/1974</u>
32.3.2	U.S. Patentee Name	<u>Maurer</u>
32.4.2	U.S. Patent Class	128
32.5.2	U.S. Patent Subclass	<u>421</u>
32.1.3	U.S. Patent Number	<u>3,893,462</u>
32.2.3	U.S. Patent Date	<u>07/00/1975</u>
32.3.3	U.S. Patentee Name	Manning
32.4.3	U.S. Patent Class	128
32.5.3	U.S. Patent Subclass	419 F
32.1.4	U.S. Patent Number	<u>4,084,595</u>
32.2.4	U.S. Patent Date	<u>04/00/1978</u>
32.3.4	U.S. Patentee Name	<u>Miller</u>

32.4.4	U.S. Patent Class	128
32.5.4	U.S. Patent Subclass	422
32.1.5	U.S. Patent Number	4,774,967
32.2.5	U.S. Patent Date	10/00/1988
32.3.5	U.S. Patentee Name	<u>Zanakis et al.</u>
32.4.5	U.S. Patent Class	<u>128</u>
32.5.5	U.S. Patent Subclass	785
34.1.1	Other References	<p>McCaig, Colin D., [37 <u>Spinal Neurite</u>    <u>Reabsorption and Regrowth in vitro</u>    <u>Depent on the Polarity of an Applied</u>    <u>Electric Field</u>, [38 [i <u>Development</u>, [1    100, 31[14 41, (1987).</p>
34.1.2	Other References	<p>Borgens, Richard B., A. Blight, D.    Murphy &amp; L. Stewart, [37 <u>Transecte</u>    <u>Dorsal Column Axons Within the Guinea</u>    <u>Pig Spinal Cord Regenerate in the</u>    <u>Presence of an Applied Electric</u>    <u>Field</u>, [38 [0 [i <u>Journal of</u>    <u>Comparative Neurology</u>, [1 250:168[14    180, (1966).</p>
34.1.3	Other References	<p>Borgens, Richard B. <u>a.</u> Blight and M. ←  McGinnis, [37 <u>Behavioral Recovery</u>    <u>Induced by Applied Electric Fields</u>    <u>after Spinal Cord Hemisection in</u>    <u>Guinea Pig</u>, [38 [0 [i <u>Science</u>, [1    238:366[14 369, (Oct. 16, 1987).</p>
34.1.4	Other References	<p>Wallace, M. Christopher, C. Tator and    I. Piper, [37 <u>Recovery of Spinal Cord</u>    <u>Function Induced by Direct Current</u>    <u>Stimulation of the Injured Rat Spinal</u>  </p>

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35. Abstract Code

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36. Abstract

A method and apparatus for stimulating nerves  
in the central nervous system of a mammal to regenerate  
within the central nervous system applies an oscillating  
electrical field to the central nervous system across a  
lesion in the central nervous system. The polarity  
reversal period of the electrical field is long enough  
to stimulate growth of cathodally facing axons of the  
nerve cells in the central nervous system but is shorter  
than a die back period of anodally facing axons of the  
nerve cells.